

CLAIMS

1. A sound level adjustable muffler to vary the sound level at the exhaust comprising:
5 an outer cylinder and an inner resonator;
a muffler chamber being defined as the space within said outer cylinder and the
outside of said inner resonator;
an entrance port having a given opening area and through which said exhaust gases
enter said muffler chamber;
10 a resonator cone to divert exhaust gases around said inner resonator;
said inner resonator having a plurality of resonator holes along its length and through
which enters said exhaust gases;
a secondary resonator set between said inner resonator and an exit port;
a moveable plug to vary the available surface area for exiting said exhaust gases;
15 said moveable plug being actuated between closed and open configuration by way of
a sliding rod sliding along an axis parallel to the length of said outer cylinder.
an annular passage created when said sliding rod slides to an open position
said annular passage surrounding said moveable plug to increase surface area
available for said exhaust gases.

20 2. A sound level adjustable muffler to vary the sound level at the exhaust as in claim
1 having the following method of use:
actuating said moveable plug into an open configuration opens an annular passage
which increases exit surface area;
25 said moveable plug actuated by said sliding rod;

said moveable plug being in an open configuration increases total surface area available at said secondary resonator which increases sound level accordingly; actuating said moveable plug into a closed configuration closes an annular passage which decreases exit surface area making the total surface area available at the secondary resonator equal to the available surface area at the entrance port and thus reducing sound level.

3. A sound level adjustable muffler to vary the sound level at the exhaust as in claim

1 wherein:

said sliding rod being activated by an actuation means.

4. A sound level adjustable muffler to vary the sound level at the exhaust as in claim

3 wherein:

said sliding rod activation means being selected from the group comprising but not limited to direct connection to an actuating motor;

indirect connection by way of a cable adjusted by a control lever near handlebars;

an electric motor having an electrical control near said handlebars.

5. A sound level adjustable muffler to vary the sound level at the exhaust as in claim

4 wherein:

an attachment means is provided to attach said actuation means.

6. A sound level adjustable muffler to vary the sound level at the exhaust as in claim

1 wherein:

a cylindrical seal seals an area between the outside of said inner resonator and the inside of said moveable plug.

7. A sound level adjustable muffler to vary the sound level at the exhaust as in claim

5 1 wherein:

supporting segments support said inner resonator within the center of said outer cylinder.

8. A sound level adjustable muffler to vary the sound level at the exhaust as in claim

10 1 wherein:

a secondary resonator support segment to support said secondary resonator within said outer cylinder.

9. A sound level adjustable muffler to vary the sound level at the exhaust as in claim

15 1 wherein:

said secondary resonator has a horn like ending.

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